EMS & Trauma Section
EMS for Children,
PO Box 202951,
1400 Broadway,
Room C314A,
Helena MT 59620

EMSC/CHILD READY CONNECTION Newsletter

JANUARY VOLUME 2, ISSUE 1

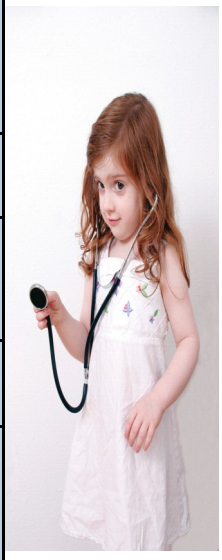
WHAT'S NEW?	PAGE
EMSC PREHOSPITAL SURVEY	2
RESPONSE RATE	2
CHILD READY MONTANA NEWS	3
APPEARANCE	4
ASSESSMENT TRIANGLE	4
FLU SEASON IS HERE!	4
JUMP START PEDIATRIC MCI TRIAGE	5
COMMUNICATION TIPS	6
GENERAL APPROACH TO PEDIATRIC PATIENTS	6
SUICIDE SCREENING IN EDS	6
SMART DIAPERS	7
WHAT DiD 2013 DELIVER FOR MEDICINE AND HEALTH?	7
ATV SAFETY	8
HEALTHCARE PROVIDERS GUIDANCE	8
TRIVIA	9
TRAINING RESOURCES	9

A word from the EMSC Program Manager:

Greetings!

The **EMERGENCY MEDICAL SERVICES FOR CHILDREN (EMSC)** Program aims to ensure that emergency medical care for the ill and injured child or adolescent is well integrated into an emergency medical service system.

We work to ensure that the system is backed by optimal resources and that the entire spectrum of emergency services (*prevention, emergency response, prehospital care, hospital care, interfacility transport, and rehabilitation)* is provided to children and adolescents, no matter where they live, attend school or travel.



CHILD READY MONTANA—
STATE PARTNERSHIP OF REGIONALIZED CARE (SPROC)
The intent of the program is to develop an accountable culturally component and assessable emergent care System for pediatric patients across Montana.

THE RIGHT CARE AT THE RIGHT PLACE AT THE RIGHT TIME WITH THE RIGHT RESOURCES!

Exciting news and events are going on this month.

See What's New! Happy New Year!

MONTANA DPHHS Healthy People. Healthy Communities. Department of Public Health & Human Services

CHILD READY montana

Montana EMS Systems — Montana Emergency Care

THE 2013 EMSC PREHOSPITAL ASSESSMENT IS STILL OPEN FOR THE WEB-BASED SURVEY UNTIL JANUARY 8TH! DON'T LET THIS OPPORTUNITY PASS YOU BY!

MONTANA'S RESPONSE RATE IS: 85.6%

Current National Response Rate*

68.9%

** This rate will fluctuate as more states start the assessment.*

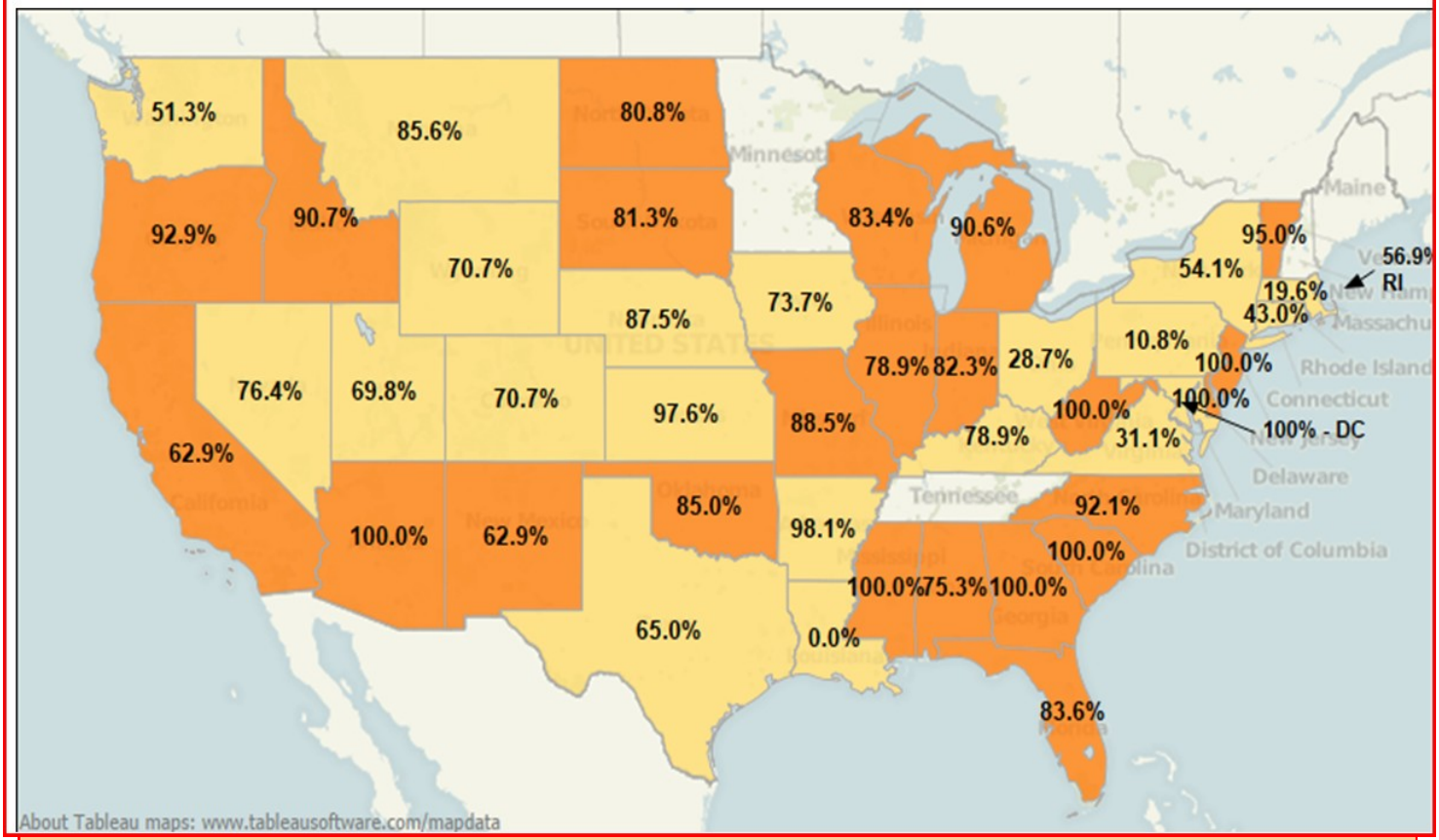
Assessment Open Closed

The map below shows the calculated percentage of EMS Agencies in participating states/territories that have **completed** the EMS for Children's assessment of medical direction and equipment.

You can **hover over** any state/territory for more information (states began assessing at different time periods).

Please check back for updated information as the assessment opens for more states!

Rev. 01/03/14 10:58 MT (Updated Daily)



EMS AGENCIES RESPONSDED: 185

EMS AGENCIES SURVEYED: 216

THANK YOU FOR HELPING MONTANA BE PEDIATRIC READY!!

Child Ready Montana is a State Partnership Regionalization of Care Grant (SPROC) funded by the Federal Health Resource d Services Administration (HRSA). Montana is one of the 6 states to be awarded this grant with the **Montana Emergency Medical Services for Children (EMSC) Program.**

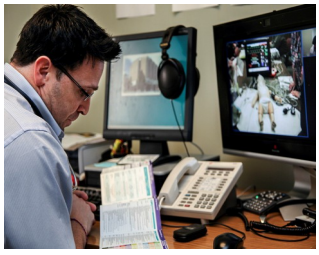
Child Ready M**ontana** is finishing up the mock code simulation for Eastern Montana in April. We will be moving on to the Central Montana and the Western areas in the summer. Through the mock codes we have discovered community support, EMS/Flight team support, facility support and experienced certified staff. Other discoveries are lack of debriefing processes and follow through, communication barriers with EMS, out of date policies, policies not specific to pediatric patients, lack of equipment and lack of certifications. These findings are very important to support the efforts of enhancing pediatric emergent care needs.

Each community received a minimum of two Mock Codes on an infant simulator with each simulation being an emergent respiratory situation. Dr. Rich Salerno, Pediatric Intensivist and PICU Medical Director helped develop the scenarios for the Mock Codes. Respiratory emergencies were chosen because this is one of the major reasons (besides trauma) that children are transported to St. Vincent Healthcare.

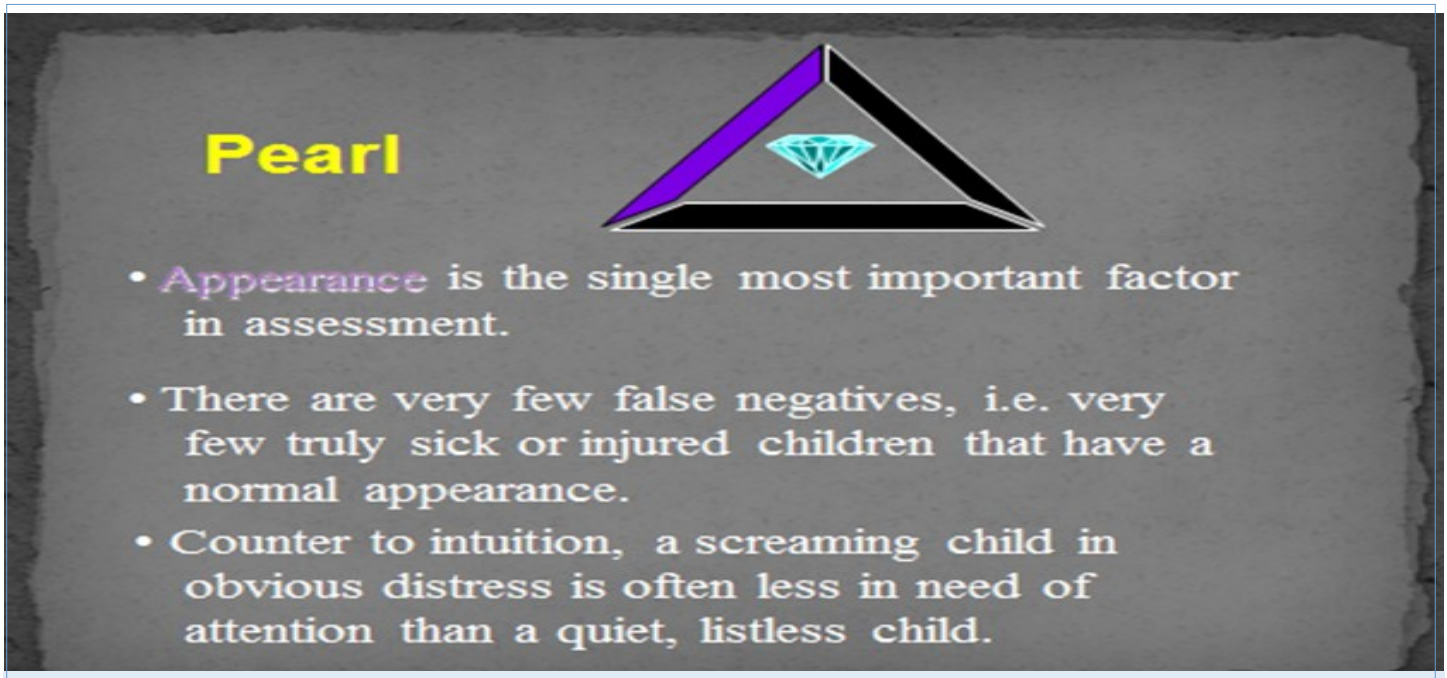
During the Mock Code, we connect (via telehealth) front line staff at the rural hospitals with the Pediatric Intensivist on standby at St. Vincent Healthcare. Our goal is to make sure that each hospital knows how to present a patient via telehealth and how to interact with the Pediatric Intensivist. The mock codes are conducted with each of the rural sites to demonstrate what they can expect when they request an emergent consultation with the Pediatric Intensivist. To date, each consult has been received with overwhelming appreciation and support. Dr. Salvatore Buonaito, has conducted the majority of the mock codes, all of which have occurred throughout the day (e.g. 7:00am to 6:00pm). The times for the Mock Codes are chosen by the rural hospitals with the goal of getting the majority of their healthcare providers to the training.

Thank you to the facilities that we have reached:

St. James Healthcare Butte	16 participants
Colstrip Medical Clinic Colstrip	**05 participants**
Roosevelt Medical Center Culbertson	6 participants
Rosebud Health Care Center Forsyth	**3 participants**
Frances Mahon Deaconess Hospital Glasgow	6 participants
Big Horn County Memorial Hospital Hardin	**9 participants**
Ft. Belknap Medical Center Harlem	13 participants
Northern Montana Hospital Havre	**6 participants**
Phillips County Hospital Malta	8 participants
Holy Rosary Healthcare Miles City	**6 participants**
Sheridan Memorial Hospital Assoc. Plentywood	10 participants
North East Montana Health Services Poplar	**6 participants**
Daniels Memorial Healthcare Center Scobey	6 participants
NEMHS Trinity Hospital Wolf Point	**5 Participants**



Dr. Salvatore Buonaito, Pediatric Intensivist reviews Broselow tape



ASSESSMENT TRIANGLE:

In addition to these quick assessments a detailed history is obtained. The assessment triangle is used to quickly assess the needs of the patient. Do they need O2, should they be seen first? Are they critical or stable, sick or not sick. The triangle assesses the child's appearance, work of breathing and circulation. It is non-invasive, non-threatening, quick and easy.

Appearance
Use the Acronym TICLS to assess tone, interactiveness, consolability, look/gaze and speech/cry.

Breathing is assessed. Note the rate, the work involved - retractions, nasal flaring, the child's position; tripoding, and the child's anxiety.

Circulation is assessed. What is the child's color? Are they pale, mottled, ashen. Is there any cyanosis? How about capillary refill?

A more detailed assessment is performed after the initial assessment triangle is completed and the patient is stabilized.

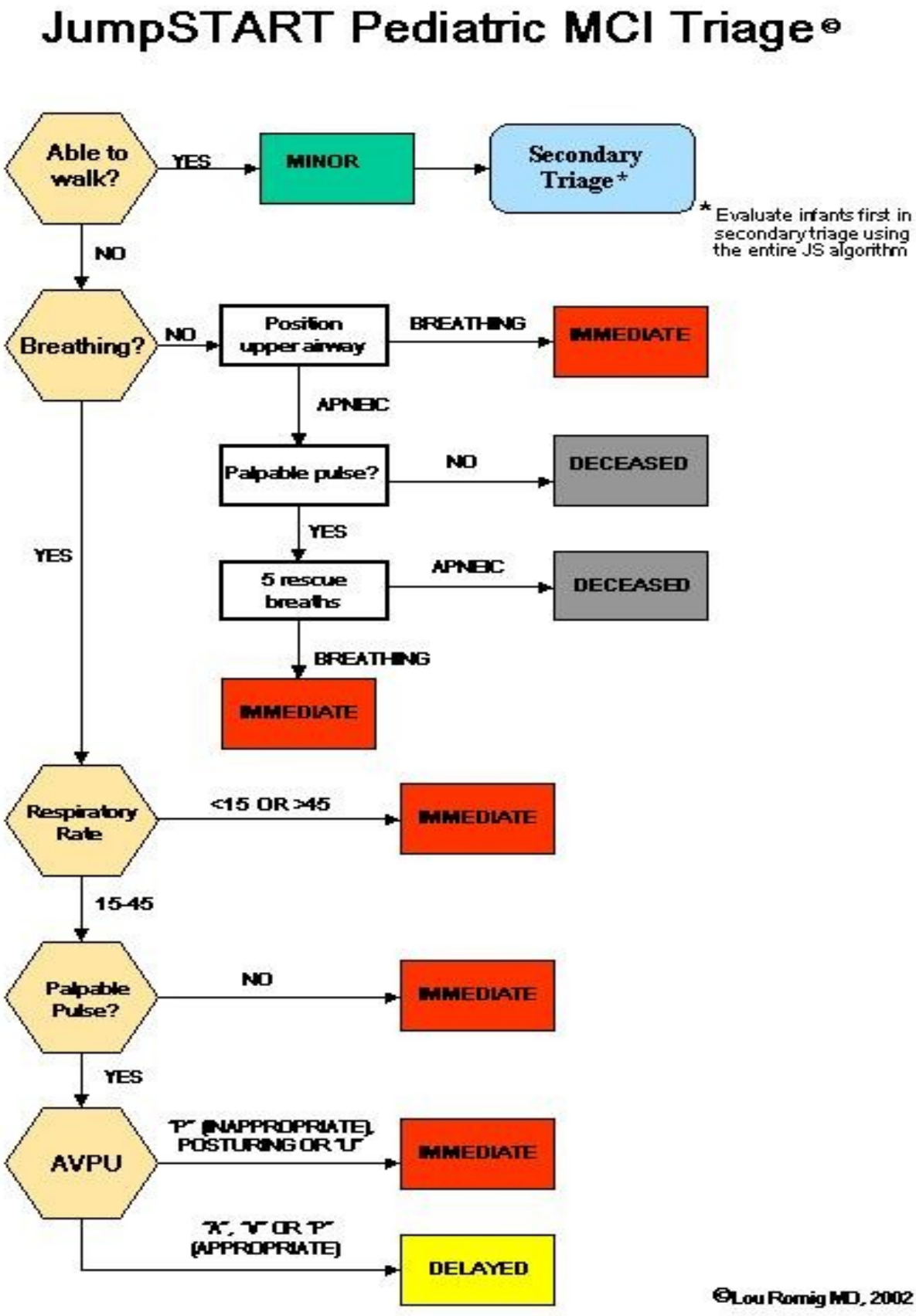
FLU SEASON ALREADY HITTING SOME STATES HARD

Seasonal flu is *increasing nationwide and is already very high in some states according to the Centers for Disease Control and Prevention* (CDC). At least five deaths in Texas are attributed to H1N1, which appears to be the leading strain of flu this year. H1N1 first emerged during the 2008-09 flu season.

The CDC is saying “this strain has a predilection for young adults” and encourages everyone to get a flu shot this year, especially those in states already seeing high numbers of cases and those who are in high-risk groups. This year’s flu vaccine includes protection against the H1N1 strain. They expect flu levels to increase over the next few weeks. **It is especially important for EMS providers, healthcare workers, and all other emergency services personnel to get the flu shot this year to help protect themselves, their coworkers, and the people they serve.**

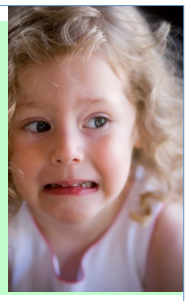
The CDC also released a Clinician Advisory Notice for H1N1 (http://emergency.cdc.gov/HAN/han00359.asp with guidelines for treatment and reporting. Their weekly FluView (http://www.cdc.gov/flu/weekly/) gives updated data and medical surveillance on flu cases across the country.

The JumpSTART Pediatric MCI Triage Tool and other pediatric disaster and emergency medicine resources http://www.jumpstarttriage.com/The_JumpSTART_algorithm.php



COMMUNICATION TIP :

Choose your words carefully when explaining vital sign measurements to a young child. Avoid saying, for example, “I’m going to take your pulse now.” The child may think that are going to actually remove something from his or her body. A better phrase would be “I’m going to count how fast your heart beats.”



COMMUNICATING WITH CHILDREN —GENERAL APPROACH TO PEDIATRIC PATIENTS

√ **Provide reassurance and explanations before, during and after procedures; don't show needles/scissors if possible. Tell child what will happen next (3 yrs and up.)**

√ **Offer simple choices; use language that children understand.**

√ **Let child handle equipment if possible.**

√ **Offer praise and rewards—stickers?**

√ **Keep warm; ask about pain (5 years and up.)**

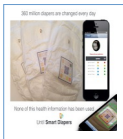
√ **Be honest. Encourage trust by gaining parent's cooperation; reassure caregivers' concerns and allow them to stay with child as much as possible.**

ASSOCIATION OF POSITIVE RESPONSES TO SUICIDE SCREENING QUESTIONS WITH HOSPITAL ADMISSION AND REPEATED EMERGENCY DEPARTMENT VISITS IN CHILDREN AND ADOLESCENTS

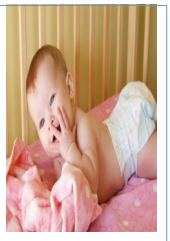
A study published in *Pediatric Emergency Care* aimed to evaluate whether suicide screening items from the Risk of Suicide Questionnaire (RSQ) could predict psychiatric hospitalization at the index visit and repeated emergency department (ED) when they were regularly administered in a pediatric ED setting. This study reviewed consecutive case series of patients aged 8 to 18 years presenting with psychiatric chief complaints during a 9-month period to single urban tertiary care pediatric ED. Eligible patients were administered a subset of questions from the RSQ. Outcomes included the odds of psychiatric hospitalization at the index visit and repeated ED visits for psychiatric complaints within the following year, stratified by age.

Responses to suicide screening questions were available for 442 patients of the 568 patients presenting during the study period. A total of 159 of 442 patients were hospitalized and 130 of 442 patients had one or more ED visits within the following year. The proportion of patients providing positive responses to one or more suicide screening questions did not differ between patients aged 8 to 12 years and those aged 13 to 18 years. A positive response to one or more of the questions was significantly associated with increased odds of psychiatric hospitalization in the older age group and with repeated visits to the ED in the younger age group. The study concluded that positive responses to suicide screening questions were associated with acute psychiatric hospitalization and repeated ED visits.

For more resources: http://prevention.mt.gov/suicideprevention/index.php



SMART DIAPER SENDS URINE DATA TO PHONES



Babies may not be able to talk, but according to a company in New York, their urine can. Yaroslav Faybishenko, one of the founders of Pixie Scientific, recently explained to ABC News that "urine is full of so much health information," which is why he and his wife decided to create a *data-collecting diape*r.

According to the National Institute of Diabetes and Digestive and Kidney Diseases, the "Smart Diaper" works via a dry-reagent panel at the front that functions like a QR code, which parents are able to scan once the diaper is wet. Then, the Smart Diapers app for iOS or Android phones analyzes the baby's urine data. *The Smart Diaper sends urine data to parents' phones via an app.* According to the company's web-site, the information Smart Diapers collects can alert parents to signs of urinary tract infections (UTI), long-term dehydration and potential kidney problems. Parents would only need to use one Smart Diaper per day. The advantage of this consistent data collection, according to Pixie Scientific, is that parents can monitor their child's health over the course of months or years, allowing for trends to emerge. **About 3% of children in the US are affected by UTIs each year, according to the National Institute of Diabetes and Digestive and Kidney Diseases. In addition, 1 million pediatrician visits are attributed to UTIs every year.**

The diapers are not currently on the market, because the FDA has yet to approve the urine test strips embedded inside the diaper. Though there is not yet any pricing information for the diapers, Faybishenko estimates the Smart Diapers will be about 30 to 40% more expensive than regular diapers. He does note, however, that parents would only need to use one of the diapers a day. Though other so-called smart diapers that alert parents when a baby's diaper is wet - such as Huggies' TweetPee from Brazil - will soon hit the market, the Smart Diaper is the first of its kind to actually analyze a baby's urine.

Written by Marie Ellis; Copyright: Medical News Today Pediatrics / Children's Health Article

WHAT DID 2013 DELIVER FOR MEDICINE AND HEALTH?

Making body parts- An artificial ear, that looks and acts like a normal ear, was created using 3-D printing and injectable molds. Body cells were at last successfully turned into human embryonic stem cells.

Computers and gadgets - Computer wizardry is now starting to appear on wearable gadgets that can instantly gather previously unimaginable data. One piece, held to the forehead, can read vital signs. The sheer amount of data collected could have an unprecedented effect on the control over diseases. There is now a watch that can check on heart rate, motion, sweating and skin temperature.

A tooth sensor (fitted inside a tooth) helps detect and monitor oral activity. Information collected could be very helpful by providing information on teeth grinding, eating or drinking levels, and even measure stress levels. Soon there will be a wireless sensor that will fit inside a normal crown, and could become standard procedure in dental and health offices for health monitoring.

An automated "albumin testing tool" (on a smartphone) can pick up this biomarker of kidney damage by camera-phoning an at-home urine pot, and could be helpful in the self-monitoring of chronic illness such as diabetes.

There is the possibility of a stick-on tattoo for monitoring in place of all that wiring in hospitals. Also coming are implantable sensors that may monitor cancer and diabetes and novel jewelry creations that can 'translate sign language into words.'

MacGill, Markus. "A year in medicine: review of 2013." *Medical News Today*. MediLexicon, Intl., 20 Dec. 2013. Web. 2 Jan. 2014. <http://www.medicalnewstoday.com/articles/270265>

ATV SAFETY RAISING QUESTIONS

In 1988, after the federal government declared all-terrain vehicles an “imminent hazard,” manufacturers agreed to stop selling popular three-wheel models. That paved the way for the growth in sales of four-wheel models and, later, side-by-side models like the Polaris.

Since that time, some things have changed in the way ATVs and other types of off-road vehicles are regulated to ensure safety. After a law passed in 2008, the Consumer Product Safety Commission began testing the stability of ATVs and enforced mandatory standards for stability and safety equipment.

Side-by-side vehicles, also known as ROVs, are still regulated entirely on voluntary standards. Manufacturers have made their own changes and have added safety features over the years, but with no clear federal standard, many questions remain about just how safe these off-road vehicles are.

The number of deaths involving people under 16 has fallen as a percentage in recent years, but the percentage **involving even younger children, 12 years and younger, has steadily risen**. In 1990, 34 percent of off-road-vehicle related fatalities were involving children 16 and younger. In 2011, 17 percent of deaths involved riders 16 or younger, but **nearly half of those deaths were involving children under 12.**

http://www.dailycomet.com/article/20131108/articles/131109554?template=printpicart

EXTREMITIES, SPINE AND HEAD MOST OFTEN INJURED

Common injuries associated with the use of off-road vehicles predominantly affect the extremities, spinal cord and head. Head trauma was the most common cause of death associated with motocross and ATV use. While children typically recover more fully from brain trauma due to head injury, similar injuries in adults have resulted in permanent brain damage, paraplegia and tetraplegia.

To improve the safety profile of this increasingly popular pastime — especially for children — the Mayo team suggests developing programs that emphasize safety training, use of protective helmets and restricting minors' access to ATVs.

http://www.mayoclinic.org/medicalprofs/atv-motocross-offroad-vehicles-pediatric-injury-epidemiology-ose0213.html

ALL-TERRAIN VEHICLE INJURY PREVENTION: HEALTHCARE PROVIDER'S KNOWLEDGE, ATTITUDES, AND THE ANTICIPATORY GUIDANCE THEY PROVIDE

All Terrain vehicles (ATVs) continue to be an increasing cause of injuries and deaths in children, especially in rural communities. More children die in the United States each year from ATV-related events that from bicycle-crashes. The purpose of this study from the *Journal of Community Health* was to determine the ATV anticipatory guidance practices of care providers, as well as their attitudes, knowledge, and the barriers in educating families about the risks of ATV use.

http://journals.lww.com/pec-online/Abstract/2012/05000/Pediatric%20All%20Terrain%

THE MONTANA ATV SAFETY COURSE

Do you need the Montana OHV Safety Certificate? In Montana, all riders aged 12 - 16 are required to complete an approved OHV Safety Course and carry the Montana OHV Safety Certificate at all times when riding on public roads open to full size vehicles.
http://www.atvcourse.com/usa/montana/

TRIVIA CONTEST:

First 3 to answer the questions wins a free Broselow tape. Look for new and exciting prizes in the next year! Email rsuzor@mt.gov)

1. What body part was grown in 2013?
2. What acronym can be used to assess appearance?
3. What is the most important aspect of assessment on a child?

TRAINING RESOURCES:

Targeted Issue (TI) Grantee Jane Brice, MD, MPH, of the University of North Carolina, Chapel Hill and her team have developed pediatric trauma courses as part of their TI project "EMS and Pediatric Trauma: A North Carolina Population-based Performance Improvement Intervention and Evaluation Using Multiple-linked Healthcare Databases." The two new courses are now available via the web for EMS providers and 911 telecommunicators:

EMS Course: This course is designed to offer emergency medical services providers an overview of pediatric trauma, the leading cause of injury and death among children in America. EMS providers will have the opportunity to learn about the scope of pediatric trauma, revisit the key findings of their pediatric patient assessment, review the benefits of specialized trauma center resources, and examine how trauma pre-planning tools can assist them in making the best transport decisions for their patients.

911 Telecommunication Course: This course is designed to illustrate how 911 telecommunications play a critical role in the prehospital management of injured children. 911 telecommunicators will have the opportunity to learn about the scope of pediatric trauma, how they can quickly deploy EMS resources, ways they can assist EMS's response by collecting valuable information, and how they can work with dispatched services to minimize response and scene times en route to definitive care.

These courses are available for continuing education credits, and North Carolina EMS and 911 providers may take the course for free through the EMS Performance Improvement Center website. The North Carolina Office of EMS has awarded the EMS Course 2.0 continuing education credits and the 911 Telecommunicator Course 1.0 continuing education credit. Providers outside of North Carolina may earn credit by taking the course through North Carolina AHEConnect and paying a $5.00 fee.

Additionally, TI Grantee Randall Burd, MD, of Children's National Health System in Washington, DC, developed the Pediatric Trauma Resuscitation Toolkit as a part of their TI project, “Reducing Errors In Pediatric Trauma Resuscitation Using a Checklist."

Please feel free to use and share these resources with colleagues.

IF YOU HAVE MISSED AN ISSUE OF THE EMSC/CHILD READY CONNECTIONS– THEY ARE ARCHIVED ON THE EMS FOR CHILDREN WEBPAGE: http://www.dphhs.mt.gov/ems/emsc/emschome.shtml